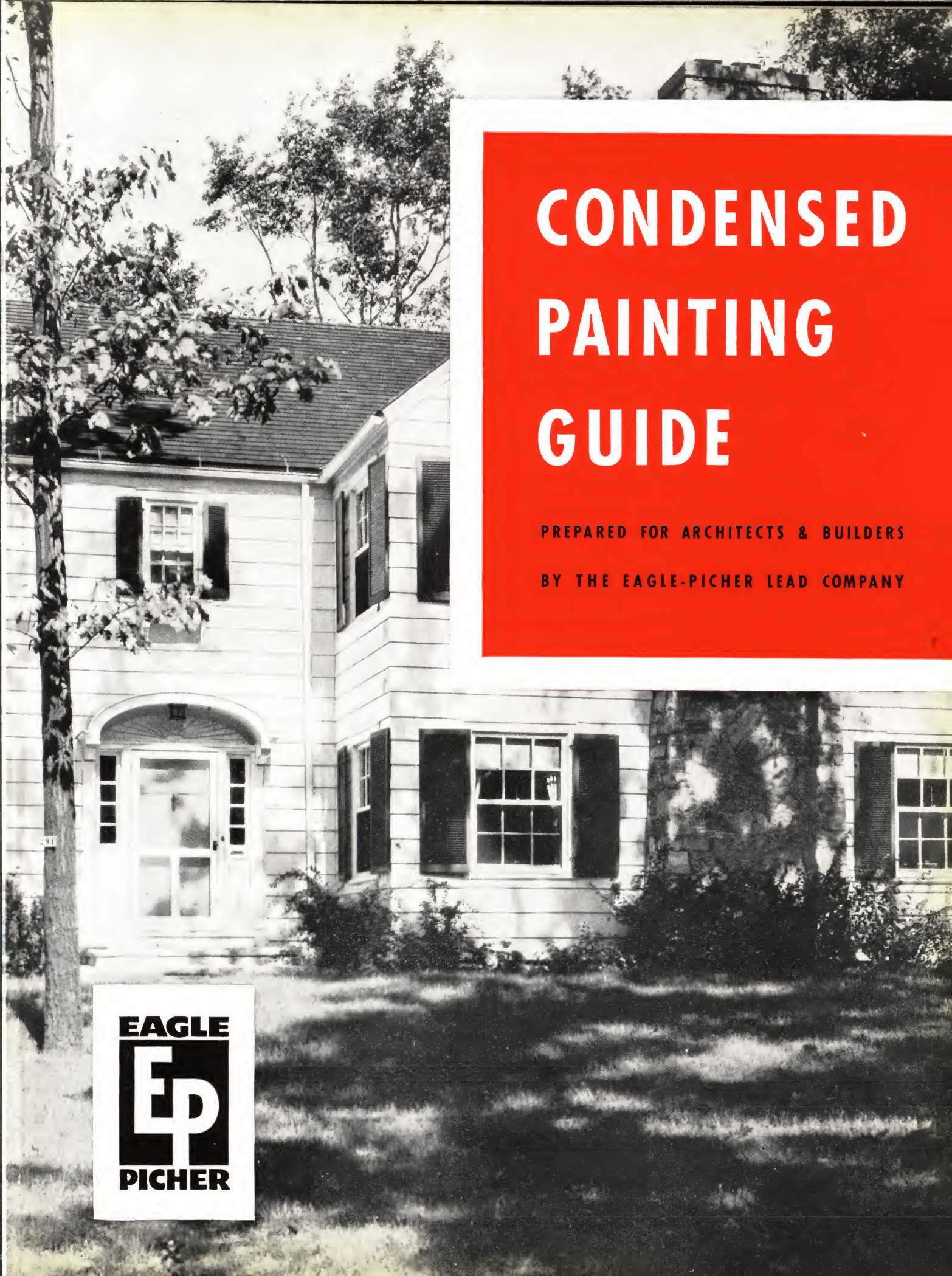




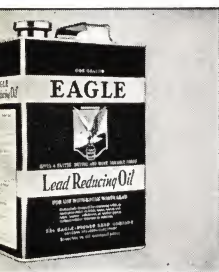
CONDENSED PAINTING GUIDE

PREPARED FOR ARCHITECTS & BUILDERS

BY THE EAGLE-PICHER LEAD COMPANY

EAGLE
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EAGLE-PICHER PAINTING PRODUCTS



EAGLE-PICHER has been manufacturing painting products since 1843. During this time, the company has conducted countless tests to determine the ideal methods for formulating and applying paints in order to achieve most satisfactory results. However, the cumulative experience of these many years has been distilled into fairly simple recommendations. This manual contains basic formulas for durable paints adapted to various surfaces and average conditions. It also includes data on surface preparation, on the number of coats required, and what precautions to follow in modifying formulas or application methods to meet certain variations from average conditions. Beyond this, it is impractical to go.

An experienced painting and decorating contractor is qualified to weigh all factors and to change his formulas and procedure to meet them. Others should strictly follow the formulas and recommendations given here, which are much more satisfactory, even under unusual conditions, than haphazard deviations from them.

SELECTING THE PROPER PAINT

Cost, exposure, required durability, frequency of cleaning and of repainting—all these factors influence the selection of the proper paint.

The principal problem in selecting paints is the adjustment between initial cost and desired durability. When properly applied, pure lead-in-oil paints are as durable as any combination of pigments, and far more durable than most.

Lead-in-oil paints can usually be prepared on the job for less cost than many paints of not even approximately equal qualities. The materials cost less, and mixing and tinting take little more time than stirring and retinting ready-mixed paints.

The labor cost for a paint job is usually two or three times the cost of the materials. Thus, if repainting will be required within one or two years, the use of a minimum-cost short-lived paint may be justified. But if repainting will be done only when the life of the original paint is over, the high cost of labor makes it considerably more economical to use the most durable paint there is, even though its initial cost may be a little higher than a short-lived cheaper paint.

It is important to remember that the service of any paint depends upon the skill of the painter. Reputable manufacturers can only guarantee the composition of the paints they sell. They cannot guarantee results.

HOW TO USE THIS GUIDE

Reliable data on the selection of durable paints for every major type of painting job are given on the following pages. Formulas are tabulated for various lead-in-oil paints according to the type and condition of the surface to be painted. Complete specifications can be written for any job by adapting these data to conditions prevailing on the project. When master painters are employed, these formulas may serve as a guide to materials and proportions. When less skilled workmen are employed, they may be made mandatory.

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DISTRIBUTED BY: **THE EAGLE-PICHER SALES COMPANY**

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Eagle pure White Lead in Oil for all types of Painting

WHITE lead as a paint pigment dates back to the Romans almost 2000 years ago. Its popularity has grown ever since, until it has become the standard of comparison. Searches to find cheaper substitutes have produced many other paint pigments, but unbiased authorities still agree that white lead remains the most universally reliable painting material.

OUTSTANDING CHARACTERISTICS

Eagle White Lead is packaged in two forms—Heavy Paste and All-Purpose Soft Paste. Either is ideally adapted for both interior and exterior work. The only difference is that All-Purpose contains a small amount of turpentine, added by a special grinding process. This makes it easier to mix on the job.

No Cracking—No Scaling

Eagle White Lead unites chemically with linseed oil and forms a soft elastic paint film. When the surface to which it has been applied expands and contracts with temperature changes, this elastic film expands and contracts with it, so that it does not crack or scale.

Perfect Repainting Surface

Good paint wears by slow, even chalking. An Eagle White Lead film wears in this way—not by cracking and scaling. It leaves a perfect surface for repainting—no burning or scraping is necessary.

Flows Freely—Good Coverage

Surface for surface, pure white lead paint will hold its own in coverage with most paints—and excel many of them. Furthermore, it brushes easier—enabling a painter to paint more surface each hour he works. An Eagle White Lead paint film goes on evenly and smoothly.

Great Hiding Power

Pigment particles in an Eagle White Lead paint form a solid mass of pigment that completely covers the surface. Its "refractive index" is high—giving it great opacity.



Easy to Mix on the Job

Oil is added to Eagle White Lead at the factory so that it is in an easy-mixing consistency when the painter receives it. He merely has to thin it into paint of the type best suited to meet surface conditions—a matter of only a few minutes for 100 lbs., which when mixed according to finish coat formula produces more than six gallons of paint.

Does Not Retain Rust Stains

A film of paint made from Eagle White Lead and oil does not react chemically with the ferrous metal compounds formed by rust. For this reason, the paint does not retain rust stains from nail heads or iron screens. The rust washes down and off the surface, leaving no stains behind which cannot be removed with water.

Easily Tinted

Painters can easily tint Eagle White Lead to any desired color (except extremely dark shades). Exact values are obtained by adding colors in oil. Color pigments are tightly held, minimizing fading.

PRACTICAL TEST PROVES DURABILITY



1 This is the midwestern community where the paint test was made. One hundred and twenty-four homes were divided into three groups and a different kind of paint used on each group. The service results were carefully checked. (All work was done by the same painters.)



3 This home is typical of the group painted with paint containing no white lead. Photograph taken after 18 months' exposure. Note discoloration.



4 This photograph shows the results of 18 months wear on paper with only 50% white lead. All houses in this group showed similar signs of failure.

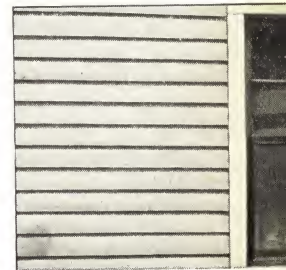


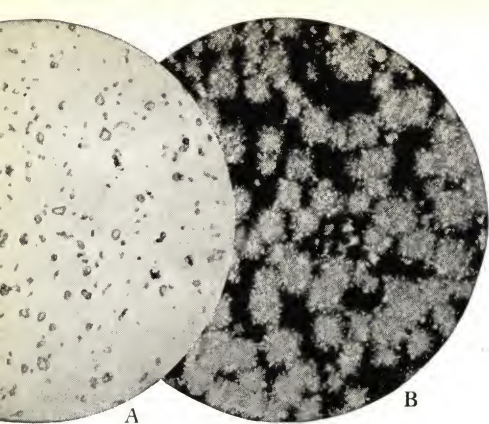
5 Same house as left, six months later. Note how rapidly the disintegration of the paint film progresses once it has begun to fail.



2 The one perfect paint job in the whole community! Eagle White Lead was the only paint ever used on this house. Note the smooth, even surface—no sign of failure after several years of weathering.

6 Two close-ups of homes in the Eagle White Lead group after the same weather exposure as homes above. Paint film still in good condition. No cracking or scaling. Perfect surface for repainting.





White lead is a chemically active pigment. These two photomicrographs illustrate chemical action that takes place when it is mixed with linseed oil. "A" shows how pigment particles look before oil is added. "B" shows how lead particles "blossom" out in linseed oil. Note that no sharp lines divide pigment and vehicle.

ELEMENTS OF PAINTS

Pigments, Oils, Thinners and Driers ... Their Relation to the Formulas

PAINT is a mixture of a pigment, which forms the "armor" of the painted surface, and a liquid called a vehicle. The pigment portion may consist of one or several elements. In the latter case, some of the substances may be "fillers," added to lower the cost (usually at the expense of durability and hiding power), or to give the paint some special quality. Colored pigments may also be added when required. The vehicle consists of a non-volatile oil; a volatile thinner to make the paint spread more readily and to give "tooth" to aid in the adhesion of succeeding coats; and driers to hasten drying.

Qualities Desired in a Pigment

Desirable characteristics of a pigment include opacity, covering power, good and enduring color, and the ability to combine actively with the oil in the vehicle. It should be neutral or basic with respect to the surface, and upon aging should present a smooth surface which can be repainted without costly surface preparation.

Qualities Required in a Vehicle

The oil portion of the vehicle should combine chemically with the pigment, forming a hard, tough and elastic film which will contract and expand with the surface; it should dry in reasonable time and not discolor the pigment. Linseed is the most widely accepted oil, but certain special oils such as Eagle Flatting Oil and Eagle Lead Reducing Oil add life to the paint and increase its sealing qualities. The duties of the "thinner," which are described above, are

generally fulfilled by turpentine, which evaporates when the paint is applied.

Proportions of Pigment and Vehicle by Volume

An exterior paint, ready to apply, should range from 28% to 32% pigment and from 68 to 72% vehicle, by volume. Too much pigment usually causes early chalking and loss of gloss, while too much vehicle causes running, wrinkling, slow drying and stickiness. Paste white lead, thinned to painting consistency according to the recommendations in this manual, will conform to this ratio.

Tinting Colors

Colored pigments ground in oil can be added to white lead paint to create all the colors except the very dark ones, in the exact values desired. When paints are being tinted, the entire quantity required for the job should be mixed at one time and in one container, so that parts of the job will not vary in color.

HOW TO MIX LEAD AND OIL PAINTS

Mixing is the first step in good painting. There is little difference in mixing lead-and-oil paints and preparing so-called ready-mixed paints for the brush. In each case, pigment and vehicle must be thoroughly mixed, color added when necessary, and the mixture strained.

STEP 1. PREPARING THE LEAD PASTE

Eagle All-Purpose Paste is merely stirred in the keg until oil and pigment are thoroughly incorporated. Heavy Paste is transferred into a larger keg, then a small amount of the oil called for by the formula is added and stirred in until the mix is just thin enough to pour.

Eagle Sublimed Blue Lead and Eagle Red Lead are prepared in the same way as Heavy Paste White Lead.

STEP 2. PREPARING TINTING COLORS

The tinting color is put into a small container and

beaten up with turpentine until it forms a creamy paste, and then grayed off with white lead before adding to the large batch of white lead paste.

STEP 3. MIXING TO FORMULA

The paste, prepared as in Step 1, is poured into a container large enough to hold three or four times the required quantity of paint. Then the oil is added in small quantities, and thoroughly stirred into the paste. Colors, mixed as in Step 2, and the required amount of turpentine are stirred in next, and finally the drier. The entire mix is then strained.

Any paint containing oil and an "active" pigment like lead should stand for about 24 hours before use. Greater uniformity, coverage and improved brushing and durability will result. The entire mix should be stirred just before application, and kept covered.

PAINT FAILURES — Appearance, Causes and Remedies

EVERY paint film eventually "wears out." The ideal way for a paint to wear is by slow, even chalking, so that when the time to repaint finally comes, the surface is smooth and requires only a minimum of preparation before repainting. Defective performance is evidenced by such failures as cracking, scaling, peeling, fading and alligatoring, which may be caused by improper paint formulation, improper workmanship, or faulty construction. By studying the many

types of paint failures, their causes and remedies, they may be entirely avoided or at least corrected at a minimum of expense. However, the more familiar one becomes with paint troubles, the more obvious is the conclusion that nearly all of them can be averted by employing skilled paint craftsmen who use paint materials which can be mixed on each job to suit the conditions of the surface and the weather.

Alligatoring

Caused by application of relatively hard, fast-drying surface coat over undercoats which are soft or slow drying. Improper oil, too much oil or insufficient drying time may be the cause. Each coat should be formulated to be successively softer than the priming coat. Alligator cracks usually do not penetrate the entire paint coat.

When not severe, the cracked layer can be wire-brushed off before painting. Otherwise the entire paint coat must be removed.

Cracking and Scaling

Results from use of hard drying inelastic paint which does not contract and expand with under surface. Old paint must be removed, usually by burning. Remedied by using properly formulated lead-in-oil paint.

Blistering and Peeling

Caused by moisture under the unbroken paint film. First evidence is a blister which later breaks and causes peeling of the paint film. All blistered paint must be scraped off, the source of moisture found and corrected, and the surface thoroughly dried before repainting.

Checking

Similar to alligatoring but much less serious and characterized by minute surface cracks. Flakes are small and generally disappear as paint gradually chalks. Before repainting, it is sufficient to brush the surface to remove loose particles.

Mildew Stains

Caused when an air-borne fungus attaches itself to wet paint in shaded areas and feeds on oil in the paint film. Mildew stains must be removed before repainting by a wash of 1 lb. tri-sodium phosphate or sodium carbonate to 1 gal. of water, after which the surface should be flushed with clean water and allowed to dry about 48 hours before repainting. Addition of $\frac{1}{2}$ oz. mercuric chloride per gallon of paint, or the use of less oil and more turpentine, is desirable in sections of the country where mildew is common.

Wrinkling

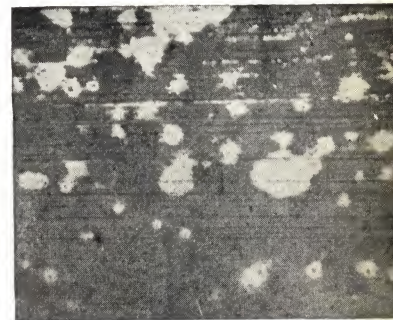
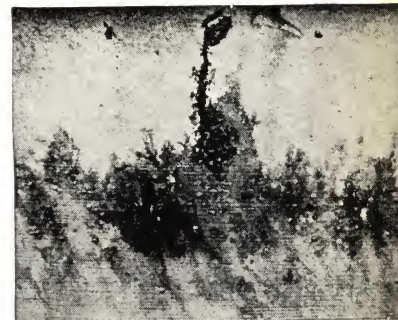
Usually caused by one of three things: (1) sudden drops in temperature; (2) application of too thick a paint; (3) using an excess of drier. To remedy, sand the surface and use a properly formulated paint applied in the correct way.

Spot Fading

Evidenced by color changes and loss of gloss in irregular patches. Caused by spots in the surface which absorb oil from the paint unevenly. It appears only when insufficient paint has been used. Application of *three* coats of properly formulated paint will avoid it.

Washing

Caused by pigments which form water-soluble compounds or by painting under damp conditions. It is evidenced by streaks at lower edges of clapboards, by accumulations on column footings and deposits on foundations.



FORMULAS FOR EXTERIOR WOODWORK

Specification Data: Painting should be done in dry weather and when the temperature is above 40° F.

Painting done at lower temperatures, especially when nights are likely to bring frost and moisture with sudden drops in temperature, will not be as satisfactory as painting done under ideal conditions. Flattening, loss of gloss, spotting and premature chalking may result.

Moisture in wood will be drawn out by the sun and form blisters under a paint film which will eventually result in peeling. Green lumber should be primed as soon as possible and allowed to stand several days before application of succeeding coats. Defer all painting two to three days after a driving rain.

In new and re-painting work, fill nail holes, cracks and crevices with putty after priming or first coat has dried, to form a smooth surface and to prevent water from entering behind the paint.

Three coats of paint on new work and two coats on repainting work are generally sufficient.



NEW WORK

COAT	PREPARATION	PAINT FORMULA	APPLICATION
PRIMING	Dust and scrape off lime, dirt and adherent matter	FORMULA NO. 1 100 lb. All-Purpose White Lead 4 gal. Raw Linseed Oil 1¼ gal. Eagle Flatting Oil or Pure Turpentine 1 pt. Best Japan Drier	Brush in carefully and lay off in an even film as this is foundation of all subsequent painting. Its importance cannot be over-emphasized
SECOND	Apply 3-7 days after priming coat. Coat knots and sapwood with shellac before applying	FORMULA NO. 2 100 lb. All-Purpose White Lead 1¾ gal. Raw Linseed Oil 1¼ gal. Eagle Flatting Oil or Pure Turpentine 1 pt. Best Japan Drier	Brush in carefully to an even film of uniform thickness
THIRD (Semi-gloss finish)	Apply 3-7 days after second coat	FORMULA NO. 3 100 lb. All-Purpose White Lead 3 gal. Raw Linseed Oil 1 pt. Best Japan Drier	Brush in carefully to an even film of uniform thickness
THIRD (Flat finish)	Apply 3-7 days after second coat	FORMULA NO. 4 100 lb. All-Purpose White Lead 2¼ gal. Eagle Flatting Oil or Pure Turpentine	Brush in carefully to an even film of uniform thickness
REPAINTING PRIMING (Not required unless bare wood is exposed)	If in good condition dust off only. Loose scaly paint scraped off. If in bad condition burn off all paint and treat as new wood	Same as for new wood if required	Same as for new wood if required
FIRST	Apply 3-7 days after spot priming if required	FORMULA NO. 5 100 lb. All-Purpose White Lead 2¼ gal. Raw Linseed Oil 1¼ gal. Eagle Flatting Oil or Pure Turpentine 1 pt. Best Japan Drier	Brush in carefully to smooth film of even thickness
SECOND (Semi-gloss finish)	Apply 3-7 days after first coat	FORMULA NO. 3 100 lb. All-Purpose White Lead 3 gal. Raw Linseed Oil 1 pt. Best Japan Drier	Brush in carefully to smooth film of even thickness
SECOND (Flat finish)	Apply 3-7 days after first coat	FORMULA NO. 4 100 lb. All-Purpose White Lead 2¼ gal. Eagle Flatting Oil or Pure Turpentine	Brush in carefully to smooth film of even thickness

Notes: Eagle Flatting Oil is recommended in preference to turpentine for its smoother brushing and greater wearing qualities and because it will produce a better and more lasting finish. If thinner brushing is desired, do not add more linseed oil to these formulas, but reduce them

to the desired consistency with Eagle Flatting Oil or turpentine. When Eagle Heavy Paste White Lead is used, add 1 pint more turpentine or flatting oil to formula No. 3, one quart more to all other formulas.

FORMULAS FOR INTERIOR WOODWORK

Specification Data: The room temperature should not be less than 70° F. Paints should be kept at this temperature before being used.

White lead, however, brushes easier than varnishes and enamels and may, therefore, be applied at lower temperatures.

All dust and dirt should be swept from the room before any paint is applied.

Three coats are usually sufficient in new work, and two coats in repainting.

In certain cases where a specially durable job is required, additional coats may be added, each coat being extremely thin.

It is advisable in specifications to require adherence to formulas only when work is *not* in the hands of qualified contractors or decorators. The following formulas will produce paint that will give satisfactory service in a majority of cases.



NEW WORK

COAT	PREPARATION	PAINT FORMULA	APPLICATION
PRIMING	Clean, sandpaper, dust off and sweep room	FORMULA NO. 6 100 lb. All-Purpose White Lead 3 gal. Raw Linseed Oil 2¼ gal. Eagle Flatting Oil or Pure Turpentine 1 pt. Best Japan Drier ALTERNATE: Formula No. 14 (See p. 9)	Brush in thoroughly and lay off smoothly with the grain
SECOND	Putty holes, cracks, etc. Sandpaper lightly and sweep room	FORMULA NO. 7 100 lb. All-Purpose White Lead 1½ gal. Raw Linseed Oil 1¼ gal. Eagle Flatting Oil or Pure Turpentine 1 pt. Best Japan Drier ALTERNATE: Formula No. 15 (See p. 9)	Apply freely and brush out well with the grain
THIRD (Semi-gloss finish)	Sandpaper lightly and sweep room	FORMULA NO. 8 100 lb. All-Purpose White Lead 3-3½ gal. Raw Linseed Oil 1 pt. Best Japan Drier ALTERNATE: Formula No. 16 (See p. 9)	Brush out carefully, laying off in an even film without brush marks
THIRD (Flat finish)	Sandpaper lightly and sweep room	FORMULA NO. 4 100 lb. All-Purpose White Lead 2¼ gal. Eagle Flatting Oil or Pure Turpentine (If Turpentine is used add 1 pt. Pale or White Enamel Varnish) ALTERNATE: Formula No. 15 (See p. 9)	Brush out carefully, laying off in an even film without brush marks
PRIMING (Not required unless bare wood is exposed)	Wash with paint cleaner to cut gloss. Rinse with clear water. Remove cracked or scaling paint. Putty nails, cracks, etc. Sandpaper if needed	Treat as new wood if required	Same as for new wood if required
FIRST	Apply after spot priming is dry	FORMULA NO. 9 100 lb. All-Purpose White Lead 1 gal. Raw Linseed Oil 2¼ gal. Eagle Flatting Oil or Pure Turpentine 1 pt. Best Japan Drier ALTERNATE: Formula No. 15 (See p. 9)	Brush out carefully to a smooth even film
SECOND (Semi-gloss finish)	Sandpaper slightly and sweep room	FORMULA NO. 8 100 lb. All-Purpose White Lead 3-3½ gal. Raw Linseed Oil 1 pt. Best Japan Drier ALTERNATE: Formula No. 16 (See p. 9)	Brush out carefully, laying off in an even film without brush marks
SECOND (Flat finish)	Sandpaper slightly and sweep room	FORMULA NO. 4 100 lb. All-Purpose White Lead 2¼ gal. Eagle Flatting Oil or Pure Turpentine (If Turpentine is used add 1 pt. Pale or White Enamel Varnish) ALTERNATE: Formula No. 15 (See p. 9)	Brush out carefully, laying off in an even film without brush marks

Notes: Eagle Flatting Oil is recommended in preference to turpentine for its smoother brushing and greater wearing qualities, and because it produces a better and more lasting finish. If thinner brushing consistency is desired, thin down with small amounts of Eagle Flatting Oil

or pure turpentine. *Do not add linseed oil.* When Eagle Heavy Paste White Lead is used, add one pint more turpentine or flatting oil to formula No. 8, one quart more to all others.

FORMULAS FOR PLASTER AND WALLBOARD

Specification Data: When enamels and varnishes are used, the temperature should not be less than 70° F. In cold weather, paints should be kept at this temperature over night before being used.

White lead, because of its superior brushing qualities, may be applied at lower temperatures.

All dust and dirt should be wiped from the surface and swept from the room before paint is applied.

Formulas given below are recommended for average conditions. They may be modified by an experienced painting contractor to meet special conditions.

When joints between wallboards are to be hidden under paint, they must be filled with putty and sanded down if necessary. (Putty made from white lead is ideal for this purpose.)



NEW PLASTER OR WALL BOARD

COAT	PREPARATION	PAINT FORMULA	APPLICATION
PRIMING	Patch cracks in plaster. Conceal joints in wallboards if required. Wipe surface clean. Glue size required on soft wallboards, when sealer or lead reducing oil is not in primer. Allow plaster to dry for 6 months	FORMULA NO. 10 100 lb. All-Purpose White Lead 3 gal. Boiled Linseed Oil 1¼ gal. Eagle Flatting Oil or Pure Turpentine 2 gal. Floor Varnish ALTERNATE: Formula No. 14 (See p. 9)	Brush with short semi-circular criss-cross strokes, allowing paint to flow and obliterate brush marks
SECOND	No preparation required. Allow 2-3 days for drying of priming coat	FORMULA NO. 11 100 lb. All-Purpose White Lead 1¼ gal. Eagle Flatting Oil or Pure Turpentine ¾ gal. Floor Varnish ½ pt. Best Japan Drier ALTERNATE: Formula No. 15 (See p. 9)	Brush with short semi-circular criss-cross strokes, allowing paint to flow and obliterate brush marks
THIRD COAT (Semi-gloss finish)	No preparation required. Allow 2-3 days for drying of second coat	FORMULA NO. 12 100 lb. All-Purpose White Lead ¾ gal. Eagle Flatting Oil or Pure Turpentine 1¼ gal. Floor Varnish ½ pt. Best Japan Drier ALTERNATE: Formula No. 16 (See p. 9)	Brush with short semi-circular criss-cross strokes, allowing paint to flow and obliterate brush marks
THIRD (Flat finish)	No preparation required. Allow 2-3 days for drying of second coat	FORMULA NO. 13 100 lb. All-Purpose White Lead 1¾ gal. Eagle Flatting Oil or Pure Turpentine 1 pt. Floor Varnish ½ pt. Best Japan Drier ALTERNATE: Formula No. 15 (See p. 9)	Brush with short semi-circular criss-cross strokes, allowing paint to flow and obliterate brush marks
PRIMING (Not required unless bare surface is exposed)	Old paint or enamel: Wash with sal soda solution to remove grease and cut gloss. Rinse with clear water. Patch cracks and coat with shellac. Scrape off cracked or scaly paint. Calcimine: Remove calcimine with warm water	Treat as new plaster or wallboard if required	Same as priming coat on new work if required
FIRST	No special preparation. Allow 2-3 days for drying of priming coat if required	FORMULA NO. 11 100 lb. All-Purpose White Lead 1¼ gal. Eagle Flatting Oil or Pure Turpentine ¾ gal. Floor Varnish ½ pt. Best Japan Drier ALTERNATE: Formula No. 15 (See p. 9)	Brush with short semi-circular criss-cross strokes, allowing paint to flow and obliterate brush marks
SECOND (Semi-gloss finish)	Allow 2-3 days for drying of first coat	Same as the third semi-gloss coat for new work	Same as the third semi-gloss coat for new work
SECOND (Flat finish)	Allow 2-3 days for drying of first coat	Same as the third flat coat for new work	Same as the third flat coat for new work

Notes: When painting over old varnish or enamel, a little floor varnish or enamel should be added to first coat. Eagle Flatting Oil is recommended in preference to turpentine for its smoother brushing

and greater wearing qualities. It produces a better and more lasting finish. When Eagle Heavy Paste White Lead is used, add one quart more flatting oil or turpentine to all formulas except alternates.

FORMULAS FOR MASONRY AND STUCCO

Specification Data: Surface must be thoroughly dry and chemically stable. Moisture should not reach the surface under the paint through faulty flashings, condensation or improper drainage. (If unsatisfactory conditions cannot be corrected, use special cement paints.)

Surface should be tested for free lime and other salts which are harmful to oil. The following solution is a simple test for free lime: Mix 1 dram phenolphthalein, and 4 oz. grain alcohol in 1 qt. of water. Dip a glass rod into this solution and touch the surface in several places. Free lime will cause a bright red spot to appear.

To correct an alkaline condition, apply a solution of 4 lbs. zinc sulphate to 1 gal. of water. Use large brush and rub in well. When dry, brush off surface before painting.

Painting should be done only in dry weather and when the temperature is not under 40° F. Allow ample time for thorough drying.

NEW WORK

COAT	PREPARATION	PAINT FORMULA	APPLICATION
PRIMING	Allow to age for at least 6 months. Test for free lime and use neutralizing solution if needed. Brush clean before painting. Surface must be dry	FORMULA NO. 14 100 lb. Heavy Paste or All-Purpose White Lead 4-5 gal. Eagle Lead Reducing Oil	Brush in thoroughly and lay off in a smooth even coat
SECOND AND THIRD (Flat finish)	Allow 3-7 days for drying. Dust clean before painting	FORMULA NO. 15 100 lb. Heavy Paste or All-Purpose White Lead 3-4 gal. Eagle Lead Reducing Oil	Brush to a smooth even coat
THIRD (Gloss finish)	Allow 3-7 days for drying. Dust clean before painting	FORMULA NO. 16 100 lb. All-Purpose White Lead 3 gal. Raw Linseed Oil 1 pt. Liquid Drier	Brush to a smooth even coat
PRIMING (Not required if paint is smooth and even)	Dust clean before painting. Paint in bad condition must be removed and those areas treated as new work	The formulas and application used for repainting are identical with those used for new work, omitting the priming coat when not required	
PRIMING	Allow 3-7 days for drying. Dust clean before painting	FORMULA NO. 14-A 100 lb. All-Purpose White Lead 3 gal. Boiled Linseed Oil 2 gal. Spar Varnish 1¼ gal. Pure Turpentine	Brush to a smooth even coat
SECOND	Allow 3-7 days for drying. Dust clean before painting	FORMULA NO. 15-A 100 lb. All-Purpose White Lead 2 gal. Raw Linseed Oil 1¼ gal. Pure Turpentine 1 pt. Liquid Drier	Brush to a smooth even coat
THIRD (Flat finish)	Allow 3-7 days for drying. Dust clean before painting	FORMULA NO. 15-B 100 lb. All-Purpose White Lead 3 qt. Spar Varnish 1¼ gal. Pure Turpentine ½ pt. Liquid Drier	Brush to a smooth even coat

REPAINTING

ALTERNATE FORMULAS (NEW WORK AND REPAINTING)

Note: Use smaller quantity of Eagle Lead Reducing Oil when greatest opacity is desired. If Eagle Heavy Paste White Lead is used, add one quart more turpentine or flattening oil to formulas 16, 14-A, 15-A.

FORMULAS FOR IRON AND STEEL

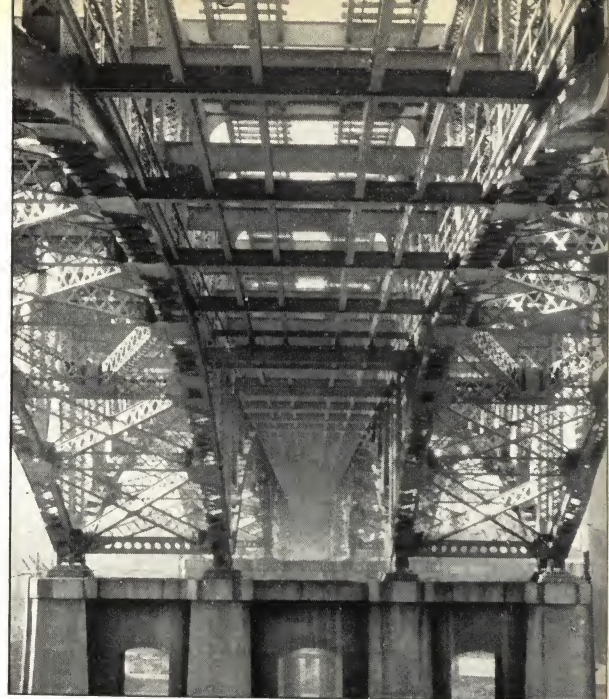
Specification Data: Painting should be done only in dry weather when the temperature is not under 40° F., particularly if nights are likely to bring frost and moisture.

Painting on exposed iron and steel should preferably be brushed to assure intimate contact of the paint with all parts of the metal work.

Sublimed Blue Lead may be used for both priming and finish coats. Each coat may be tinted characteristically to permit proper supervision.

Red Lead is often used as a second coat, as well as for priming. The second coat may be tinted by adding carbon black.

If light colors are desired with Sublimed Blue Lead or Red Lead, second and subsequent coats may be White Lead-in-Oil, plain or tinted.



NEW WORK

COAT	PREPARATION	PAINT FORMULA	APPLICATION
PRIMING OR SHOP	Remove rust, mill scale and dirt to bright metal. Clean off grease and oil with benzine	FORMULA NO. 17 (Using Eagle Sublimed Blue Lead) 100 lb. Sublimed Blue Lead-in-oil 2½ gal. Raw Linseed Oil 1½ pt. Pure Turpentine or Paint and Varnish Manufacturers' 48° to 50° Naphtha 1 qt. Rosin-free Drier FORMULA NO. 18 (Using Eagle Red Lead) 100 lb. Eagle Red Lead-in-oil 2½ gal. Raw Linseed Oil 1½ pt. Pure Turpentine or Paint and Varnish Manufacturers' 48° to 50° Naphtha 1½ pt. Rosin-free Drier	Brush on hard, carefully and thoroughly, using round brush to get into all corners and around rivets Where two coats of Blue Lead are to be applied, about a quart more thinner may be used advantageously to give flatter finish
SECOND OR FIRST FIELD	Dust off carefully	FORMULA NO. 17 (Using Eagle Sublimed Blue Lead) See above FORMULA NO. 2 (Using Eagle White Lead) 100 lb. All-Purpose White Lead 1¾ gal. Raw Linseed Oil 1¼ gal. Eagle Flatting Oil or Pure Turpentine 1 pt. Best Japan Drier	Brush on hard, carefully and thoroughly, using round brush to get into all corners and around rivets
THIRD OR SECOND FIELD	Dust off carefully	FORMULA NO. 17 (Using Eagle Sublimed Blue Lead) See above	Brush on carefully and evenly
THIRD OR SECOND FIELD (Semi-gloss finish)	Dust off carefully	FORMULA NO. 3 100 lb. All-Purpose White Lead 3 gal. Raw Linseed Oil 1 pt. Best Japan Drier	Brush on carefully and evenly
THIRD SECOND FIELD (Flat finish)	Dust off carefully	FORMULA NO. 4 (Using Eagle White Lead) 100 lb. All-Purpose White Lead 2¼ gal. Eagle Flatting Oil or Pure Turpentine	Brush on carefully and evenly
PRIMING (Not required unless bare metal is exposed)	Remove any loose paint, scale, rust and dirt to bright metal	FORMULA NO. 17 (Using Eagle Sublimed Blue Lead) 100 lb. Sublimed Blue Lead-in-oil 2½ gal. Raw Linseed Oil 1½ pt. Pure Turpentine or Paint and Varnish Manufacturers' 48° to 50° Naphtha 1 qt. Rosin-free Drier FORMULA NO. 18 (Using Eagle Red Lead) See above	Brush on hard, carefully and thoroughly, using round brush to get into all corners and around rivets
FIRST AND SECOND	Brush off dust and dirt, and scrape off loose paint	The formulas and application used for repainting are identical with the first field coat and the finish coat on new work	

REPAINTING

STIPPLES AND DECORATIVE FINISHES

DECORATION of walls in other than flat or glossy monotones to add interest and "livability" may be accomplished in a wide variety of ways by means of stipples and low-relief textures, blends of opaque colors, transparent color glazes, or by endless combinations of these methods.

These finishes are not much more expensive than an ordinary job of high quality painting. Their added cost is due largely to the extra labor involved and will therefore vary with the type of finish desired and the skill of the painter in applying it.

Selected stipples and decorative finishes are illustrated to suggest the range of decorative treatments possible with Eagle White Lead paints and glazes made with Eagle Flatting Oil. The principal techniques include the following:

STIPPLING

Stippling in one of its manifold forms is the foundation for all fine interior work on flat surfaces and also should be used as a base for work to be color glazed. It eliminates brush stroke marks, producing a surface that diffuses light and adds interest and character.

Plain brush stippling. A finish coat slightly lighter in color than the undercoat is applied, using a paint mixed a little thicker than usual. The surface is stippled by tapping the wet paint with a clean bristle stippling brush.

Grained and brush stipples. More distinctive stippled finishes may be obtained by using a whisk broom, various types of brushes, combs or similar tools to produce a low-relief texture. The experienced craftsman has an almost limitless variety of patterns at his command, merely by the use of different tools and strokes. See Figures 1 and 2.

TEXTURING

Conservatively between the very subtle texture of stippling and the extremely coarse, high relief textures produced by plastic paints (which won and lost popularity some years ago) are various decorative textures produced in a final coat of thickened white lead paints. These are worked over, while wet, with sponges, brushes, combs, the palm of the hand, crinkled paper or other materials to roughen the surface to any desired degree. In all cases the desired texture is developed by experimentation on trial panels. Degree of relief is largely governed by consistency of the paint, while character of texture is determined by the implements and stroking employed. The scope of textures possible is indicated by Figures 3 and 4.

GLAZING AND ANTIQUING

Glazing gives the effect of sunlight passing through stained glass windows, while one particular method of glazing known as "antiquing" may be used to give "age" to a painted surface. The method used consists of applying a coat of transparent special liquid, called "glazing liquid," over the regular coats and then adding spots, stripes or patches of color, which are wiped out with a cloth into cloud-like effects. The safest way to be sure of obtaining the desired effect is to have the painting contractor submit samples of the many different possibilities.

MOTTLING

This process uses two or more coats of paint in contrasting tints or harmonizing colors. One finish coat is applied and allowed to dry thoroughly. The second is then applied with a sponge, coarsely crinkled paper, or other similar material in spots and clouds, all over, but not completely concealing, the under coat. Another method is to apply the second coat to the wall, then remove it in spots by tapping with a damp clean sponge, clean crinkled paper or similar material.

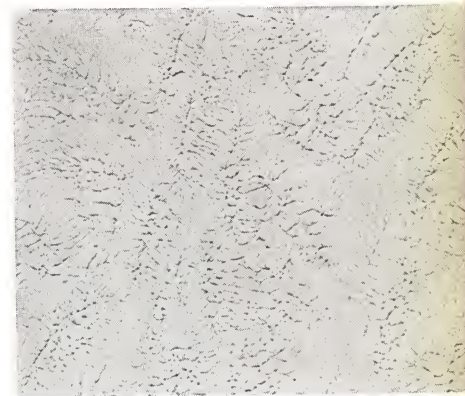
STENCILING

Decorative all-over patterns, borders or special designs may be applied by painting through oiled-paper or metal stencils with a stiff bristle brush carrying very little paint, by tapping rather than brushing. Paste white lead is often used unthinned for this purpose.

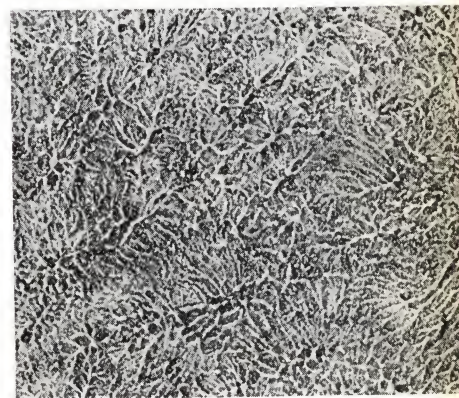
Whisk Broom Finish, Figure 1



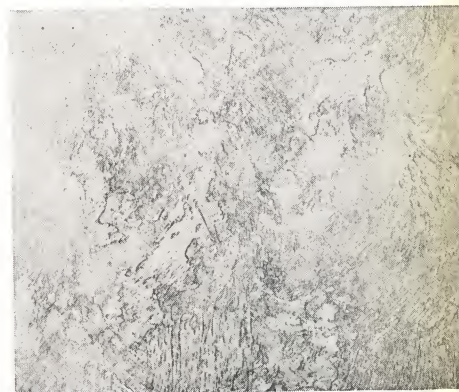
Flat Brush Stipple, Figure 2



Crinkled Palm Pattern, Figure 3



Etched Relief Pattern Figure 4



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